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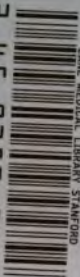
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THE BUBO PLAGUE IN CHINA, WITH A BRIEF
ACCOUNT OF THE GREAT PLAGUE
OF LONDON.

BY BURNSIDE FOSTER, M.D.

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**THE BUBO PLAGUE IN CHINA, WITH A BRIEF
ACCOUNT OF THE GREAT PLAGUE
OF LONDON.**

Although the possibility of there being in this country an epidemic of this terrible disease is a very remote one, it would not be at all surprising if an occasional case should be brought to the Pacific coast from China, where it has been raging so recently, and where it still exists. In view of these facts I have thought that some account of this, by far the most fatal and horrible of all epidemic diseases might be of interest—as well from an historical as from a medical point of view. The first extensive epidemic of the plague, of which history has recorded any definite account, occurred in the sixth century, A. D., and is usually described as the Plague of Justinian, since it existed during nearly the whole of that emperor's reign.

Although there are some discrepancies in the various accounts which I have consulted, the epidemic seems to have had its origin in Lower Egypt in the year 542. From its starting point it traveled up the Nile, and then leaving that stream it swept with increasing fury into the interior of Asia Minor. Constantinople was visited, with the result that for some days the people died at the rate of 10,000 daily. In the next year it traveled over Greece and Italy; in 545 it extended into Gaul and in the following year reached the cities of the Rhine. During the seventy years of its existence this fearful disease visited all parts of the known world and its victims were numbered by millions. In several instances historians have recorded that more than half the population of

many of the cities perished, and that scarcely people enough were left alive to bury or destroy the bodies of those who died. In the words of a recent German historian (Baas): "For long years this plague endured, intermixed at the close with small-pox, sweeping away in its devastating course the bloom of manhood and youth and destroying the greater part of women, maidens and children in all the then known world. It loosened too, almost all the rootlets of the ancient civilization, so that the withered stem was able to maintain for centuries only a feeble and sickly existence."

During the succeeding years of the Middle Ages we have no knowledge of any very extensive plague epidemics until the sixteenth century. In the year 1500 it raged in Germany, Italy and Holland for seven years; in 1534 in southern France; in 1562 for six to eight years it was pretty general throughout Europe. During these epidemics we find it recorded for the first time, that to some extent epidemics were considered preventable, and that there were attempts at disinfection and isolation. Sulphur, arsenic and alcohol were among the earliest disinfectants; and the plague physicians, "Pest Medici" as they were called, wore special gowns and masks, and anointed their hands and arms with medicated oil before coming into contact with the sick. During this and the seventeenth centuries a number of severe and fatal epidemics of this dread disease occurred in all parts of Europe, but the one of which I will make special mention is the Great Plague of London which occurred in the year 1665.

There came by chance into my possession recently two curious old books which were written, the one by a layman and the other by a physician; both inhabitants of London at that time. I refer to De Foe's "History of the Plague," and to the "Works of Dr. Thomas Sydenham," a very eminent physician of that time. These two books give, from their different points of view, such a comprehensive and interesting

account of the events of that dreadful year that I shall quote from them both in some detail:

In September, 1664, there began to be rumours in London that the plague was again raging among the Dutch and in the latter part of November two men said to be Frenchmen died of the plague in a house at the upper end of Drury Lane. During the next few months there were occasional cases in the same part of the city, but it was not until early in the following May that there began to be any serious apprehension. With the warm weather the cases became more numerous and in the second week in June about one hundred died of the plague in the out parishes and the disease began to appear in the city, and by July 1 the pestilence had become so general that business of all kinds was suspended and many of those who had the means to do so shut their homes and places of business and fled to the country. The panic among the people became so great that many went mad through fear and others deliberately committed suicide to avoid the infection. Great numbers of quacks, mountebanks and impostors seized the opportunity to prey upon the fear and credulity of the people.

De Foe records that the posts of houses and corners of streets were plastered over with doctors' bills and papers of ignorant fellows quacking and tampering in physic and inviting the people to come to them for remedies.

"Infallible, preventive pills against the plague. Never failing preservatives against infection. Sovereign cordials against the corruption of the air. Anti-pestilential pills. Incomparable drink against the plague. The only true plague water. The Royal Antidote against all kinds of infection, and such a number more that I can not reckon up, and if I could would fill a book of themselves to set them down."

Others assuming specious titles summoned people to their lodgings by such bills as these:

"An eminent High Dutch physician, newly come over from Holland, where he resided during all the time of the great plague last year in Amsterdam and cured multitudes of people that actually had the plague upon them."

"An ancient gentlewoman having practised with great success in the late plague in this city, Anno, 1636, gives her advice only to the female sex."

"An Italian gentlewoman, just arrived from Naples, having a choice secret to prevent infection, which she found out by her great experience, and did wonderful cures with it in

the late plague there, wherein there died 20,000 in one day."

"There is no doubt," says De Foe, "but these quacking sort of fellows raised great gains out of the miserable people, for we daily found the crowds that ran after them were infinitely greater, and their doors were more thronged than those of Dr. Brooks, Dr. Upton, Dr. Hodges, Dr. Berwick, or any, though the most famous men of their time."

The Lord Mayor and Aldermen adopted very sensible and very stringent measures for the separation of the sick from the well, and for general disinfection, which doubtless had a considerable effect in controlling the disease. An infected house was at once shut up and a watchman appointed to guard it day and night, to see that none entered or left it without special permission. By this means, harsh and cruel as it was in many instances, the infection was to some extent confined and localized. During August the deaths became so numerous that it was impossible to give decent burial to the bodies. Great ditches were dug, and the bodies, without discrimination were cast into them. It was estimated that above ten thousand houses in London were deserted and that about two hundred thousand people left the city. From August 8 to October 10, according to the mortality bill there died in London 59,810 people, of whom 49,605 died of the plague. The total number of deaths from the plague during the epidemic is placed by De Foe at 100,000. From November 1 the number of cases began to diminish, the death rate of those attacked became smaller and as winter came on, people returned to London, resumed their business and by February of the next year the Great Plague was over.

A very accurate clinical description of the disease is given by Sydenham, and I will presently refer to it. In regard to the nature of the infection by which the disease is spread, De Foe, after discussing various opinions says: "Others who talk of infection being carried through the air only, by carrying with it vast

numbers of insects, and *invisible creatures*, who enter into the body with the breath or even at the pores with the air, *and there generate, or emit acute poisons*, or poisonous ovæ which mingle themselves with the blood and so infect the body." Strange that the actual discovery of germs and of the ptomaine theory should have been delayed for two centuries!

The symptoms of the disease are thus described by Sydenham:

"Its first approach is almost always accompanied with shaking and shivering like the fits of an ague; presently violent vomiting, a pain about the region of the heart, a burning fever with the usual concurrence of symptoms perpetually afflict the sick till either death itself or a happy eruption of a bubo discharges the morbid matter and so frees them from that deplorable condition. It does now and then happen that it comes without any sense of fever before and suddenly kills men; the purple spots which are the forerunners of death breaking out as they are about their business. But this sudden death scarce ever happens but at the beginning of a dreadful plague. It sometimes also happens that swellings appear when neither a fever nor any violent symptoms went before. The victims sometimes died within a few hours of the first symptoms, and rarely lingered beyond four or five days. If the buboes suppurated it was considered to be a favorable circumstance and they were therefore treated by incision or by caustics."

The other local manifestations were carbuncles, furuncles and ecchymoses. A peculiar and characteristic stench was emitted from the bodies of the sick. At the beginning of the London Plague upwards of 90 per cent. of those attacked, perished. Towards the end of the year the disease seemed to become milder and the mortality was much less.

I have gathered from various sources a pretty accurate description of the epidemic now devastating China, and its identity with the above is undoubted.

The disease first appeared in the Province of Kwantung in the latter part of March and spread principally among the poor and filthy, with frightful rapidity. More than half a million people perished in two months and the great commercial centers, Canton and Hong Kong were soon attacked. In the former

city with a population of 1,000,000, the number of deaths exceeded 100,000!

The symptoms are thus described: With or without premonitory warning in the shape of malaria or chill there is a sudden onset of fever, rising to 105 degrees F. or over; there is much headache and cerebral disturbance, accompanied by stupor. In from twelve to twenty-four hours glandular swellings occur in the neck, armpits or groin, rapidly enlarging to the size of a hen's egg; these are hard and exceedingly tender; with or without a decline of the fever the patient sinks into a deeper condition of coma and dies usually at the end of forty-eight hours or sooner. If six days are reached recovery is hopeful. The glandular swelling shows no signs of suppuration, in some cases epistaxis or vomiting of blood occurs. Petechiæ appear in a few but there is no regular eruption. The mortality is about 90 per cent.

In the latter stage of the disease, when the local manifestations are most apparent, the fever usually diminishes and there occurs a sticky and very offensive perspiration. The inguinal and femoral glands are those most commonly affected, although those in the axilla and neck are often involved at the same time. The carbuncles are of less constant occurrence than the buboes and are usually seen on the lower extremities, the buttocks and the back of the neck. Among the sequelæ in those who finally recover, are continuous suppuration of the buboes, abscesses of the skin and muscles, pneumonia, dropsy, partial paralysis and mental disturbances.

The malady is undoubtedly a filth disease and caused by a bacillus. Indeed, Professor Kitasato, a competent bacteriologist and a pupil of Koch, claims to have discovered the specific germ. There is no doubt and it has been repeatedly demonstrated during the last one hundred years, that efficient quarantine gives absolute protection from the disease, and that modern sanitary means can rapidly stamp out an epidemic

should a few cases be imported into a well ordered community. It has been well named, "the disease of barbarism," from the fact that it only occurs among the semi-civilized. There is little to be said concerning treatment. There is no known specific and the treatment, like that of all acute fevers, must be supporting and symptomatic. Should there be given sufficient opportunity to study this disease scientifically, which is not at all likely, I am convinced that the only specific medication would be found in the development of the antitoxin theory. It is also probable that immunity might be given by inoculation of an attenuated virus. Fortunately our shores are so well protected by quarantine and our communities are so well ordered from a sanitary point of view that it would be impossible for this plague to make much headway within our borders, even should a case or two find their way through the gates of commerce.



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